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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BOYER, CHARLES I

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,995

Applicant(s)

SAITO ET AL.

Examiner

Charles I. Boyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-13 and 15-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7, 9-13 and 15-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to applicants' request for continued examination received June 20, 2005. Claims 1-7, 9-13, and 15-19 are currently pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. The rejection of claims 1-6, 9-12, and 15 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tadsen et al, US 5,527,489 is withdrawn in view of applicants' amendment and response.

The rejection of claims 1-7, 9-13, and 15 under 35 U.S.C. 102(a) as being anticipated by Nitta et al, EP 936,269 is withdrawn in view of applicants' amendment and response.

Nitta et al teach a process for preparing high density detergent compositions (see abstract). An example of such a process adds sodium carbonate and sodium tripolyphosphate to a mixer, followed by alkylbenzene sulfonic acid, and finally followed by an aqueous solution of

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acrylic acid-maleic acid copolymer (meets the liquid binder limitation of the claims) and zeolite with a particle size of 4 microns, yielding free-flowing granules with a bulk density of 760 g/L (page 13, example 1). Note that this process includes blowing a gas during the neutralization step (see page 23, table 5). As this reference meets all material limitations of the claims at hand, the reference is anticipatory.

Applicants have traversed this rejection on the grounds that Nitta et al do not teach or otherwise provide for each of the present claim limitations. The examiner respectfully disagrees and reiterates that an aqueous solution of acrylic acid-maleic acid copolymer meets the liquid binder limitation of the present claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al, EP 936,269.

Nitta et al teach a process for preparing high density detergent compositions (see abstract). An example of such a process adds sodium carbonate and sodium tripolyphosphate to a mixer, followed by alkylbenzene sulfonic acid (note that here the liquid is added after the powder), and finally followed by an aqueous solution of acrylic acid-maleic acid copolymer (meets the liquid binder limitation of the claims) and zeolite with a particle size of 4 microns,

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yielding free-flowing granules with a bulk density of 760 g/L (page 13, example 1). Note that this process includes blowing a gas during the neutralization step (see page 23, table 5). Nitta et al teach that the liquids of the invention may be added at any step in the process depending on the composition of the granules desired (page 8, paragraph 60). Further, known substances generally employed in detergent compositions, such as aluminosilicates, may be added prior to the step of adding liquid components (page 8, paragraph 62). Nitta et al do not specifically teach the addition of an inorganic powder prior to the addition of a liquid binder, after the liquid acid precursor has been neutralized.

First, it is well established in the art that there is only one way to form detergent agglomerates, that is, by mixing powders with liquid binders. Depending on the specific properties of the agglomerates desired, the person of skill in the art may modify the amounts of powder and binder added, the order of addition of these components, and the residence time of the resulting agglomerates in the mixer. For example, denser granules may require more binder and a longer residence time in the mixer. It is well known that too much binder may result in a sticky mass, and so the formulator will have to add more powder, or not enough binder will result in agglomerates that do not hold together, and so the formulator will have to add more binder. It is the examiner's contention that such modifications are well within the confidence level of one of ordinary skill in the art.

This argument is supported by Nitta et al when they teach that the liquids of the invention may be added at any step in the process depending on the composition of the granules desired, and known substances generally employed in detergent compositions, including powders, may be added at various stages along the process (see again paragraphs 60 and 62). In view of this

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teaching, and the examiner's assertion set forth above, it would have been obvious to one of ordinary skill in the art to add a liquid binder after the addition of a powder, subsequent to a neutralizing step, and so satisfy the present claim limitations.

Applicants have traversed this rejection on the grounds that the strict addition requirements set forth in the claims for the inorganic powder has unexpectedly allowed the applicants to advantageously control particle size in a manner that cannot otherwise be achieved when such materials are not added after neutralization of the liquid acid precursor and before addition of the liquid binder. Such a discovery and the advantageous particle size results that are associated therewith are more than the result of mere optimization, and are in no way obvious to those of ordinary skill in the art.

The examiner does not reject this argument out of hand, however, applicants' own specification appears to contradict this argument. In the first paragraph of page 19 of the specification, applicants state: "The method of adding the liquid binder may be carried out continuously or in a plurality of batches. It is preferable that the liquid binder is added to the neutralization mixture obtained in step (A) before or after the addition of the inorganic powder. By the addition of the liquid binder at this stage, the adhesiveness of the granular surface by the liquid binder can be reduced, whereby the granulation can be suppressed. In the process of the present invention, besides adding a part of or all of the optional ingredients in step (A), the optional ingredients can also be formulated in step (B)" (emphasis added).

This disclosure appears to support the examiner's argument that the powders and binders used for forming agglomerates may be added any time the formulator desires, based on the desired properties of the final product. Applicants' teaching that the binder may be added either

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before or after the powder appears to teach away from the “strict addition requirements” in applicants’ arguments. With respect to applicants’ “advantageous particle size,” the examiner notes that a particle size is not claimed. Furthermore, applicants’ specification teaches a particle size of less than 700 microns, whereas Nitta et al teach preferred particle sizes of from 300 to 800 microns (page 12, paragraph 97). Accordingly, the rejection is maintained.

4. Claims 1-7, 9-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mort III et al, US 6,794,354.

Mort et al teach a continuous process for making a detergent composition (see abstract). This process begins with a neutralization step containing a liquid acid precursor and sodium carbonate as an alkaline inorganic material, followed by an intermediate step where optional liquid or particulate materials may be added, such as a zeolite free-flow aid. The final agglomeration step adds a liquid binder to the free-flowing powder obtained from the previous steps (col. 6, line 25-col. 7, line 35). An example of such a process results in detergent agglomerates having a bulk density of 680 g/L and a particle size of 550 microns (col. 15, example 1).


Mort et al do not specifically teach the process of the present claims, however, when a zeolite free-flow aid is added in an intermediate step, after neutralization, and followed by a liquid binder in the agglomeration step, the claim limitations are satisfied. As such an order of addition is clearly contemplated by Mort et al, it would have been obvious to one of ordinary skill in the art to formulate such a composition with a reasonable expectation of successfully obtaining a detergent agglomerate.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles I. Boyer whose telephone number is 571 272 1311. The examiner can normally be reached on M-F 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571 272 1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Charles I Boyer
Primary Examiner
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